3.0 DESCRIPTION OF *CHULA VISTA SUBAREA*, AND SUMMARY OF CONSERVATION AND TAKE ESTIMATES

The *Chula Vista Subarea,* the area for which Take Authorization will be granted pursuant to this Subarea Plan, consists of the territory located within the City jurisdictional boundaries, as such may be adjusted for annexations from time to time. The *Chula Vista Subarea* lies wholly within the *Chula Vista MSCP Planning Area* and is comprised of the City Planning Component described in Section 2.1 of this Subarea Plan and that portion of the Otay Ranch Planning Component located within the City boundaries, as described in Section 2.2.

Implementation of the Chula Vista Subarea Plan will ensure conservation of core biological resource areas and associated habitat linkages identified in the MSCP Subregional Plan that are located within the boundaries of the *Chula Vista Subarea.* In addition, implementation of the Chula Vista Subarea Plan will contribute significant conservation outside the *Chula Vista Subarea* within the *Chula Vista MSCP Planning Area* in the unincorporated County MHPA. The boundaries of the *Chula Vista Subarea* and areas planned for conservation are shown on Figure 1-2.

Although most of the City Planning Component has been developed (or is developing currently), a total of approximately 2,251 acres of the Preserve (approximately 1,940 acres of which represents undisturbed habitat types) will be conserved within this portion of the *Chula Vista Subarea*. Upon completion, the Preserve within this component will include representative areas of major canyon systems that support stands of coastal sage scrub and maritime succulent scrub, including Rice and Long canyons. This Planning Component will also add rare habitats associated with San Diego Bay, as well as portions of the Sweetwater and Otay River systems to the Preserve.

The portion of the Otay Ranch Planning Component located within City boundaries and the *Chula Vista Subarea* is within the Otay Valley Parcel, described in Section 2.2.1 of this Subarea Plan. This part of the City includes substantial areas of land which have historically been used for dry farming. However, it also includes important habitat resources, most notably the Otay River Valley and its tributary canyons, Salt Creek Canyon, Poggi Canyon and Wolf Canyon. Approximately 2,742 acres within Otay Ranch will be conserved within the subarea boundaries (approximately 2,617 acres of which represents undisturbed habitat types). In addition, an estimated 3,610 acres will be conserved in the County MHPA, outside the Subarea, as a result of mitigation for development within the city related to Otay Ranch.

A total estimated 3,010 acres of the Otay River Valley will be conserved through implementation of this Subarea Plan: 2,742 acres within the Otay Ranch Planning Component and 268 acres west of Heritage Road within the City Planning Component. The Otay River Valley flows in an east to west direction along the southern boundary of the City, and is an important habitat link from Otay Mountain to San Diego Bay. Vegetation in this area of the Preserve includes coastal sage scrub, maritime succulent scrub, grasslands (primarily non-native), riparian scrub and disturbed riparian scrub, natural and disturbed streambed, and eucalyptus woodland. Principal species found in this area include the coastal California gnatcatcher, cactus wren, southern California rufous-crowned sparrow, least Bell's vireo, and yellow breasted chat.

In addition to conservation of biological resources found within the City and Subarea boundaries, implementation of the Chula Vista Subarea Plan will contribute an estimated total of 4,250 acres of habitat conservation outside of the *Chula Vista Subarea*, but within the MSCP Subregional Preserve. These contributions to the overall conservation effort are the result of mitigation requirements for Covered Projects throughout the Subarea. Dedication of land outside the *Chula Vista Subarea* which occurs as a result of implementation of Covered Projects included in this Subarea Plan will be made within the MHPA boundaries targeted for biological preserve by the MSCP Subregional Plan and generally within the *Chula Vista MSCP Planning Area.*

Section 3.1 which follows, describes the changes made to the Chula Vista Subarea Plan subsequent to public review of the 1996 Draft City of Chula Vista Subarea Plan. Section 3.2 provides a summary of estimated Take and the anticipated conservation that will result from implementation of this Subarea Plan.

3.1 Changes to this Subarea Plan and Analysis of Consistency

The MSCP Subregional Plan and Final EIR/EIS were adopted by the City of San Diego, the project's lead agency, and approved by the Wildlife Agencies in 1997. The Final EIR/EIS evaluation used as its basis for consideration draft Subarea Plans from participating jurisdictions, including the City (MSCP Subarea Plans, Volume II, August 1996). This City of Chula Vista Subarea Plan includes changes which have been made to the 1996 Draft City of Chula Vista Subarea Plan ("1996 Draft Subarea Plan"). Each of the changes depicted on Figure 3-1 and discussed in Sections 3.1.1 through 3.1.5 are consistent with the goals of the MSCP Subregional Plan and Final EIR/EIS. Additionally, one species, the QCB, is being added as a Covered Species as described in Section 3.1.6 of this Subarea Plan.

3.1.1 Rolling Hills Ranch

The Rolling Hills Ranch property is located in the northeast corner of the City. The project has an approved SPA Plan and Tentative Map from the City that is consistent with the Preserve boundaries shown in the MSCP Subregional Plan and 1996 Draft Subarea Plan.

In response to updated biological information, Pacific Bay Homes, the developer of Rolling Hills Ranch, agreed to terms with the City and the Wildlife Agencies in July 2001 to adjust the eastern-most area of the approved project (Subarea 3). The terms provide for implementation of a revised plan for Subarea 3, which will add conservation beyond that contemplated in the 1996 Subarea Plan. The revised plan, depicted on Exhibit A of Appendix G of this Subarea Plan, eliminates all development in the area originally approved as Neighborhood 13 in the Rolling Hills Ranch SPA Plan and redesigns Neighborhood 12 in order to expand conservation along the western ridgeline. While slightly expanding the development area of Neighborhood 12, the redesign will significantly expand the open space connection between Rolling Hills Ranch, the eastern habitat conservation on OWD land, and San Miguel Mountain. The 82.5 acres of new Preserve will ensure preservation of a strategic ridgeline that contains three known QCB locations and a substantial population of variegated dudleya. Implementation of the

terms will also provide for enhanced conservation of Otay tarplant and San Diego goldenstar.

The street located along the western edge of Neighborhood 11 will be moved easterly, and lots 9 through 12 and lot 19 on the approved Tentative Map will be eliminated in order to increase onsite Otay tarplant preservation by 2.6 acres. The internal open space corridor between Neighborhoods 9 and 10A and Neighborhoods 11 and 12 contains approximately 22.6 acres of onsite neutral open space that will be designated as a Tarplant Management Area (TMA). The TMA may also include the adjacent graded slopes if the management plan for the area determines that revegetation with Otay tarplant and other native plant species can be accomplished. To augment existing Otay tarplant in the TMA, topsoil containing Otay tarplant will be moved from development areas in Neighborhood 11 to the graded slopes in the TMA. Because of the location and configuration of the TMA, it will be conserved as onsite open space but will not be included in the Preserve. An Otay tarplant management program will be created to guide habitat management within the TMA and the program will be funded through establishment of a non-wasting endowment, in an amount not to exceed $100,000, to be provided by the developer. In addition, Rolling Hills Ranch will contribute off-site mitigation for Otay tarplant. Off-site mitigation will include preservation of 5.8 acres within the San Miguel Ranch Mitigation Bank containing approximately 15,080 plants and conservation of a separate off-site parcel located within the MSCP Subregional Preserve that is a minimum of 10 acres and contains a minimum of 15,000 Otay tarplants. Two locations outside the TMA will also receive special consideration. These two areas, located in the northwest corner of Neighborhood 11 (2.6 acres) and the southwest corner of Neighborhood 12 (2.9 acres), are part of the brush management area located between development and the Preserve. In order to encourage the viability of narrow endemic plant growth in these areas, a modified brush management protocol will be implemented to provide for selective thinning only during appropriate times during the tarplant seasonal cycle (i.e., before the plant emerges).

Overall, an estimated 314.6 acres of upland habitat will be conserved to mitigate for habitat impacts resulting from Rolling Hills Ranch development, consisting of approximately 265.9 acres of habitat conserved onsite combined with approximately 48.7 acres of habitat conserved off-site. Of the 265.9 acres conserved onsite, approximately 214.2 acres are incorporated into the Preserve. These areas include coastal sage scrub, native and non-native grassland and a variety of plant species, including Otay tarplant, variegated dudleya and San Diego goldenstar. In addition, three known locations of the QCB will be conserved in the Preserve. The remaining onsite open space (51.7 acres) is not included in the Preserve. The remaining onsite open space that is not included in the Preserve is comprised of two separate TMAs (approximately 5.8 acres and 16.8 acres) and three neutral open areas (approximately 27 acres).

3.1.2 Bella Lago

Located in the northeast area of the City (Figure 3-1), Bella Lago is a major project comprised of parcels previously designated as the Watson-McCoy, Clarkson, and Turner properties. The Watson-McCoy property was identified in the MSCP Subregional Plan and 1996 Draft City of Chula Vista Subarea Plan as a Minor Amendment Area while the Clarkson and Turner properties were identified as Major Amendment Areas. The Watson-McCoy property was identified as a Minor Amendment Area because a final configuration for open space had not been determined. Minor Amendment Areas were defined in the 1996 Draft Subarea Plan as "properties on which habitat could be partially or completely eliminated (with appropriate mitigation) without significantly affecting the overall goals of the City's Subarea Plan" (1996 Draft Subarea Plan, p. 55). The Clarkson and Turner properties were identified as Major Amendment Areas, requiring a formal amendment to the City's Take Authorization processed by the Wildlife Agencies.

Development entitlements for the Bella Lago project have not been granted by the City. However, based on updated biological information, the property owner has now agreed to terms with the City and the Wildlife Agencies, for an onsite Preserve configuration, off-site mitigation, and conditions for coverage contained in Section 7.5.6.5 of this Subarea Plan. As a result of the terms for Bella Lago with the City and the Wildlife Agencies, Bella Lago is a Covered Project.

The onsite Preserve design and off-site mitigation, combined with the conditions for coverage established by this Subarea Plan, will ensure conservation of sensitive habitat and species in a manner consistent with conservation levels assumed in the MSCP Subregional Plan and Final EIR/EIS.

3.1.3 Inverted "L" Property

The property known as the Inverted "L," located in the northeast area of the City (Figure 3-1) was identified in the MSCP Subregional Plan and 1996 Draft Subarea Plan as a Major Amendment Area. The 1996 Draft Subarea Plan required that "requests for major amendments to the City's Subarea Plan's Take Authorization would be processed by the Wildlife Agencies consistent with applicable laws and regulations (including the National Environmental Policy Act (NEPA) and CEQA) in effect at the time the request for an amendment is received" (p. 56).

The northern, 139.25-acre portion of the Inverted "L" property has been purchased by the OWD for siting of a reservoir facility and conservation purposes. The Chula Vista MSCP Subarea and Planning Area map (Figure 1-2) therefore identifies this area as part of an Other Agency Preserve Planning Effort. The southern, 175.8-acre portion of the Inverted "L" property has been acquired by the USFWS for conservation purposes. The Chula Vista MSCP Subarea and Planning Area map (Figure 1-2) therefore identifies this portion as 100% Conservation Area. These modifications are considered consistent with the MSCP Subregional Plan and Final EIR/EIS.

3.1.4 San Miguel Ranch

The approximately 743-acre southern parcel of the San Miguel properties, located west of Rolling Hills Ranch and the Otay Water District Auld Golf Course, was annexed into the City in December 2000. Prior to annexation, San Miguel Ranch was part of the County of San Diego MSCP Subarea Plan, South County segment, and Take Authorization for the San Miguel properties was provided through the adopted County Plan. During the annexation process, the SMR MSCP Annexation Agreement was completed, which transferred the County Take Authorization for this project to the City.

The SMR MSCP Annexation Agreement (Appendix C), is an agreement among five parties: the County of San Diego, the City, the Wildlife Agencies, and Trimark. The SMR MSCP Annexation Agreement is intended to accomplish the following:

- Recognize the Take Authorization applicable to the southern parcel under the County MSCP Subarea Plan and provide valid Take Authorization of Chula Vista Covered Species and associated habitats within the southern parcel of San Miguel Ranch prior to issuance of Take Authorization from the Wildlife Agencies to the City for its MSCP Subarea Plan;

- Ensure that conservation required by the adopted County MSCP Subarea Plan, including the conservation of natural open space constituting a minimum of 169 acres on the southern parcel and 166 acres on the northern parcel, will be realized;

- Require the conservation of 11 supplementary acres of habitat that will significantly add to the long-term viability of the Otay tarplant; and

- Ensure the conservation and management of approximately 352 acres to be transferred to the SDNWR (approximately 186 acres on the southern parcel and 166 acres on the northern parcel).

The provisions of the SMR MSCP Annexation Agreement are consistent with the adopted County of San Diego Subarea Plan, South County Segment, the MSCP Subregional Plan and the Final EIR/EIS. In fact, conservation provided for by the Agreement exceeds the original requirements of MSCP, providing additional conservation land and significantly enriching the conservation program for the Otay tarplant.

3.1.5 University Site

3.1.5.1 History of the University Site

The Final EIR/EIS for the MSCP Subregional Plan identified two alternatives relative to a University Site in the eastern portion of Otay Ranch: the "Existing GDP Alternative" which consists of a 400-acre University Site in the Salt Creek area and the "Modified GDP Alternative." Under the Modified GDP Alternative, two options were identified. Policy Option 1 addresses a smaller, 288-acre University Site that would be developed above the slopes that define Salt Creek Canyon. Policy Option 2 assumes that the 288-acre area identified in Policy Option 1 would be conserved. The method of conservation would be acquisition by the Wildlife Agencies and inclusion in the Preserve. Further, it was assumed that the Wildlife Agencies would facilitate acquisition of an alternative University Site acceptable to the City through a land exchange or other acceptable mechanism. Policy Option 2 was the alternative that was included in the project description for the MSCP and was analyzed in the Final EIR/EIS as the "MHPA Project." The Final EIR/EIS concluded that no significant unmitigated impacts would result from the adoption of Policy Option 2.

In further discussions between the City and the Wildlife Agencies, a proposal was forwarded that would reconfigure the boundaries of the University Site and the Preserve without any acquisition by the Wildlife Agencies. This proposal was defined as the "Alternative Preserve Design." In April 1999, the City completed a comparative analysis of the conservation value of the Alternative Preserve Design to Policy Option 2 ("Salt Creek Preserve Analysis," Appendix H). One of the conclusions of the Salt Creek Preserve Analysis was that rerouting the university road traversing Salt Creek Canyon to a location outside the Salt Creek watershed would "greatly improve the Alternative Preserve Design." Based on this and other conclusions, the City has further modified the University Site by eliminating the road traversing Salt Creek and adding a habitat restoration/enhancement component.

The University Site included in this Subarea Plan ("University Redesign") represents the product of an iterative process of refinement of the University Site. Alternatives that have been previously proposed and considered as a part of this iterative process have certain differences from and are superceded by the University Redesign. The University Redesign is the alternative proposed in the Subarea Plan based on the fact that, as demonstrated in the following analysis, it (1) does not result in any new significant environmental impacts; (2) offers equivalent or better biological value; and (3) is consistent with the objectives of Policy Option 2 as described in the MSCP Subregional Plan Final EIR/EIS.

3.1.5.2 University Site Preserve Boundary Adjustment Process

The MSCP Subregional Plan provides for adjustments to the boundaries of the MHPA or subarea plan preserves through a "like or equivalent" exchange concept. As per Section 5.4.2 of the MSCP Subregional Plan, since the physical configuration of Preserve in the University Site included in this Subarea Plan is different than the Preserve configuration of Policy Option 2, the Preserve biological value of the University Redesign must be analyzed and deemed the same or greater than the Preserve biological value of Policy Option 2. The MSCP Subregional Plan states:

> *Adjustments to the MHPA and/or Preserve boundaries can be made without the need to amend the MSCP Subregional Plan or subarea plan if the adjustment will result in the same or higher biological value of the Preserve. The determination of biological value of the proposed change is made by the local jurisdiction and must have concurrence of the wildlife agencies. No amendment of the subarea plan is needed for an approved equivalent exchange. The comparison of biological value will be based on the following biological factors:*
>
> - *Effects on significantly or sufficiently conserved habitats (i.e., the exchange maintains or improves the conservation, configuration, or status of significantly or sufficiently conserved habitats, as defined in Section 4.2.4 [of the MSCP Subregional Plan]);*
>
> - *Effects to covered species (i.e., the exchange maintains or increases the conservation of covered species);*
>
> - *Effects on habitat linkages and function of Preserve areas (i.e., the exchange maintains or improves a habitat linkage or wildlife corridor);*
>
> - *Effects on Preserve configuration and management (i.e., the exchange results in similar or improved management efficiency and/or protection for biological resources);*
>
> - *Effects on ecotones or other conditions affecting species diversity (i.e., the exchange maintains topographic and structural diversity and habitat interfaces of the Preserve); and/or*
>
> - *Effects to species of concern not on the Covered Species list (i.e., the exchange does not significantly increase the likelihood that an uncovered species will meet the criteria for listing under either the Federal or State Endangered Species Acts).*

3.1.5.3 Description of the University Redesign

A graphic comparison of the Preserve boundary of Policy Option 2 and the University Redesign is presented in Figure 3-2. The primary physical differences between the University Redesign and the MHPA Project is the addition of a development area on the east side of Salt Creek and removal of development from areas containing coastal sage scrub and maritime succulent scrub on the western slopes of Salt Creek. It should be noted that, while the University Redesign proposes development in roughly the same location as Policy Option 1, as identified and evaluated in the Final EIR/EIS, the University Redesign differs from Policy Option 1 by proposing less development east of Salt Creek (53 versus 288 acres) and by preserving important coastal sage scrub and maritime succulent scrub resources on the western slopes of Salt Creek.

The University Redesign component of the project includes restoration and/or enhancement of 20.6 acres of coastal sage scrub/maritime succulent scrub within the Salt Creek area of the Preserve. Prior to development of this area, a restoration and enhancement plan will be prepared, consistent with the guidelines established in the Otay Ranch Coastal Sage Scrub and Maritime Succulent Scrub Replacement Master Plan (1995) prepared as part of the Otay Ranch Phase 2 Resource Management Plan. The Master Plan specifies enhancement and restoration goals, techniques and monitoring. Coastal sage scrub restoration and enhancement areas will be interspersed with maritime succulent scrub restoration/enhancement in a pattern that is consistent with the existing mosaic of the two habitats within the study area.

Disturbance of coastal sage scrub within the new university development areas on the east side of Salt Creek will be subject to grading restrictions during the gnatcatcher nesting season. Additionally, individual barrel cactus that are within the grading area will be salvaged prior to grading and translocated to suitable sites within the adjacent habitat areas. Translocation sites will have a similar slope aspect as the native location.

Any temporary impacts from grading that encroach into habitat areas will be restored consistent with the guidelines established in the Otay Ranch RMP. All brush management activities will be conducted within the development area boundaries, and will be consistent with brush management requirements of the Otay Ranch RMP.

3.1.5.4 Analysis of the Biological Value of the University Redesign

In the spring of 2000, the City contracted with Dudek and Associates, Inc. (Dudek) to perform an analysis of the University Redesign (Appendix I). The following, excerpted from the Dudek report, provides the analysis and findings of biological equivalency for the University Redesign.

There are differences between the University Redesign and the existing MHPA boundary as described in the MSCP Subregional Plan and its associated Final EIR/EIS. Differences include changes in habitat and species conservation levels, differences in the location and type of edge effects, and differences in wildlife movement and linkage features of the Preserve. However, the University Redesign has been specifically designed to meet or exceed the conservation goals and the biological value for the Preserve in Salt Creek. As a result, there are no new potentially significant impacts arising from the University Redesign that were not previously analyzed in the Final EIR/EIS under the MHPA Project.

The University Redesign results in an overall increase of 78.8 acres in the amount of habitat conserved, including increases of 4.7 acres of disturbed coastal sage scrub, 11.4 acres of maritime succulent scrub and 59.3 acres of grassland (Table 3-1). The University Redesign would also result in conservation of additional habitat containing point data for sensitive species, including three gnatcatchers, four cactus wren and one Cooper's hawk (Table 3-2). The University Redesign would, however, result in a net decrease in conservation of coastal sage scrub of 10.3 acres (including the loss of 26.4 acres of coastal sage scrub and the gain of 4.7 acres of disturbed coastal sage scrub and 11.4 acres of maritime succulent scrub.) Also within the portion removed from conservation under the University Redesign are areas containing point data for three southern California rufous crowned sparrows and two San Diego barrel cactus.

The following is a detailed comparison of biological value of the University Redesign to the MHPA Project based on these six biological factors.

1. Effects on Significantly or Sufficiently Conserved Habitats – The physical boundaries of the University Redesign would result in a net decrease of 10.3 acres of coastal sage scrub habitats (including disturbed coastal sage scrub and maritime succulent scrub), as shown in Table 3-1. However, the project proposes to enhance/restore a total of 20.6 acres of coastal sage scrub habitat in a manner prescribed in the Otay Ranch RMP for such restoration/enhancement. Compensation for the loss of coastal sage scrub habitats by restoration/enhancement would maintain or improve the conservation of coastal sage scrub within the Preserve.

   Habitat within the Salt Creek area has been impacted by fire over the last several years. Field observations by biologists (Dudek, 1994, 1997, 1998, 1999) have revealed that many of the impacted areas are having difficulty recovering from the fires and are showing signs of invasion by exotics. These areas have a high likelihood for success of restoration and enhancement due to the abundance of adjacent high quality habitat and species density and diversity. This provides seed sources for plants and increased potential for repopulation by wildlife. It is anticipated that the 20.6 acres of proposed enhancement/restoration would result in a net increase in viable coastal sage scrub habitats in the Salt Creek area.

Table 3-1: Vegetation in MHPA Project Preserve[1] Versus University Redesign

Conserved Vegetation Type[2]	MHPA Project Preserve (Acres)[2]	University Redesign (Acres)[2]	Net Change
Coastal Sage Scrub	636.7	610.3	-26.4
Disturbed Coastal Sage Scrub	3.6	8.3	+ 4.7
Maritime Succulent Scrub	87.8	99.2	+ 11.4
Grassland	60.4	119.7	+ 59.3
Riparian Scrub	12.5	12.5	- -
Disturbed Riparian Scrub	119.8	119.8	- -
Disturbed Natural Flood channel/Streambed	115.8	117.0	+ 1.2
Eucalyptus Woodland	9.8	12.0	+ 2.2
Field Crops	0.3	26.7	+26.4
Total	**1,046.7**	**1,125.5**	**+ 78.8**

[1]MHPA Project Preserve is the Modified GDP Alternative – Policy Option 2.
[2]Based on 1996 MSCP GIS database; developed lands are not included in Preserve acreage calculations.

2. Effects to Covered Species – Covered Species in the Salt Creek area include coastal California gnatcatcher, coastal cactus wren, Cooper's hawk, golden eagle, least Bell's vireo, orange-throated whiptail, southern California rufous crowned sparrow, Otay tarplant, San Diego barrel cactus, snake cholla and variegated dudleya. The Dudek analysis identified a quantitative reduction in terms of point data for two species, rufous crowned sparrow and San Diego barrel cactus (Table 3-2,). It is important, however, to examine potential effects to all of the Covered Species since point data may not represent all species in all locations in the study area.

The Quino checkerspot butterfly is also found in the University Salt Creek area. This species was not included as a Covered Species in the MSCP Subregional Plan, and was not included in the Dudek analysis. A separate analysis for this species is provided in Section 4.4.

Table 3-2: Sensitive Species in MSCP Project Preserve[1] Versus University Redesign

Conserved Species	MHPA Project Preserve (Points)[2]	University Redesign (Points)[2]	Net Change
Coastal California Gnatcatcher	89	92	+ 3
Coastal Cactus Wren	60	64	+ 4
Cooper's Hawk	2	3	+ 1
Golden Eagle	1	1	- -
Grasshopper Sparrow	2	2	- -
Least Bell's Vireo	4	4	- -
Orange-throated Whiptail	3	3	- -
Southern California Rufous-crowned Sparrow	28	25	- 3
Otay Tarplant	1	1	- -
San Diego Barrel Cactus	111	109	- 2
Snake Cholla	6	6	- -
Variegated Dudleya	4	4	- -

[1] MHPA Project Preserve is the Modified GDP Alternative – Policy Option 2.
[2] Numbers represent points in the 1996 MSCP GIS database. No species polygons are within the existing, approved Preserve design or Alternative Preserve Design.

a. Coastal California gnatcatcher (*Polioptila californica californica*) – The point data for this species reveals that the University Redesign would conserve an additional 3 point locations. Coastal California gnatcatcher relies on coastal sage scrub as its primary habitat. The University Redesign results in conservation of 10.3 net acres less coastal sage scrub habitats (including Coastal Sage Scrub, disturbed Coastal Sage Scrub and Maritime Succulent Scrub) but provides for restoration/enhancement of 20.6 acres of coastal sage scrub habitat, with a high likelihood for success. In addition, the University Redesign provides for additional habitat linkages that would be important to the long-term viability of this species. These additional linkages include a connection to an archipelago of coastal sage scrub habitats leading up to Upper Otay Reservoir and habitat areas to the north and east. The second additional connection would be to the south through the elimination of proposed active recreational use areas in the Otay River Valley. With the restoration/enhancement of habitat and addition of linkages provided for in the University Redesign, this species is anticipated to be conserved at a similar or better level than would be expected with the MHPA Project.

b. Coastal cactus wren (*Campylorhynchus brunneicapillus*) – The University Redesign would result in additional habitat conservation for this specie (and additional 11.4 acres of maritime succulent scrub) and conservation of additional recorded point locations. In addition, the coastal sage scrub enhancement/restoration is proposed to be interdigitated with maritime succulent scrub, providing additional habitat resources for this species. Additional habitat linkages, as discussed above, will also benefit this species.

c. Cooper's hawk (*Accipiter cooperii*) – The University Redesign will conserve an additional 59.3 acres of grassland, which is important foraging habitat for this species.

d. Golden eagle (*Aquilla chrysaetos*) – As with the Cooper's hawk, this species would benefit from additional conservation of grassland habitats.

e. Least Bell's vireo (*Vireo bellii pusillus*) – Conservation of Wetlands and riparian scrub, the primary habitat for this species would remain the same under the University Redesign.

f. Orange-throated whiptail (*Cnemidophorus hyperythrus beldingi*) – This species is primarily found in coastal sage scrub habitats, which will be conserved, restored or enhanced at an equivalent or better level under the University Redesign. Therefore, this species is expected to not be affected or potentially benefit from the revised project.

g. Southern California rufous crowned sparrow (*Aimophila ruficeps canescens*) – Primary habitat for this species is coastal sage scrub. The University Redesign would impact three point locations of this species. As indicated for other coastal sage scrub species, the overall net effect of the University Redesign on this species would be potentially beneficial.

h. Otay tarplant (*Deinandra [Hemizonia] conjugens*) – No point locations for this species are impacted by the University Redesign. With the additional conservation of 59.3 acres of grassland under the University Redesign, this species may be provided additional habitat opportunities.

i. San Diego barrel cactus (*Ferocactus viridescens*) – Two point locations of this species would be impacted by the University Redesign; however, the project includes measures to translocate these individuals to suitable sites within the Preserve. There are recent and local examples of successful translocation projects for this species. In addition, the coastal sage scrub restoration/enhancement to be carried out as a part of the University Redesign would include this species in the plant pallette. Based on the anticipated high level of success of barrel cactus translocation and the provision of suitable replacement habitat in restoration/enhancement areas,

the overall net effect of the University Redesign on this species is anticipated to be equivalent.

j. Snake cholla (*Opuntia parryi* var. *serpentina*) – No point locations would be affected. This species would also be included in the plant pallette for restoration/enhancement activities associated with the University Redesign, providing additional habitat opportunities. Therefore, the overall net effect of the University Redesign on this species is anticipated to be equivalent.

k. Variegated dudleya (*Dudleya variegata*) – No point locations would be affected. This species would also be included in the plant pallette for restoration/enhancement activities associated with the University Redesign, providing additional habitat opportunities. Therefore, the overall net effect of the University Redesign on this species is anticipated to be equivalent.

3. Effects on Habitat Linkages and Function of Preserve Areas – The University Redesign adds a wildlife corridor that provides a link between the lower Otay Reservoir and Salt Creek, connecting to an archipelago of coastal sage scrub habitat that continues to Upper Otay Reservoir an areas to the north and east. An additional linkage feature of the University Redesign is enhancement of the Otay River Valley corridor by preserving additional areas with the Otay River and removing proposed active recreation uses in the eastern portions of the Otay River Valley. Based on these factors, the University Redesign would maintain, or in some cases improve habitat linkages in the Preserve.

4. Effects on Preserve Configuration and Management – The modifications to the Preserve boundaries represented by the University Redesign are not significant in terms of management efficiency or effectiveness. Edge considerations would be related to the new development area proposed on the east side of Salt Creek. Such edge conditions are similar to those being removed as a result of the elimination of active recreation uses in the Otay River Valley. Total edge area for these two areas is similar, and the quality of potential edge effects is similar in nature (controlled recreational uses versus controlled university uses). Tables 3-3 and 3-4 provide a summary comparison of total edge area for the MHPA Project and the University Redesign (note that negative numbers on these tables represent a positive impact in terms of conservation, and vice versa). The total area subject to edge effects is reduced overall for the University Redesign as compared to the MHPA Project.

   Overall edge effects are therefore considered to be equivalent in nature and reduced quantitatively when comparing the MHPA Project to the University Redesign.

Table 3-3: Vegetation Communities within 150 Feet of Preserve Boundary

Vegetation Type	MHPA Project Preserve (Acres)[1, 2]	University Redesign (Acres)[1, 2]	Net Change
Coastal Sage Scrub	75.8	60.0	-15.8
Disturbed Coastal Sage Scrub	- -	3.3	+ 3.3
Maritime Succulent Scrub	24.9	17.9	- 7.0
Grassland	21.8	30.8	+ 9.0
Riparian Scrub	0.9	0.9	- -
Disturbed Riparian Scrub	12.1	0.6	- 11.5
Disturbed Natural Flood Channel/Streambed	8.3	0.25	- 8.05
Eucalyptus Woodland	1.8	1.7	- 0.1
Field Crops	0.3	8.0	+ 7.7
Total	**145.9**	**123.4**	**- 22.5**

[1]Acreage of conserved vegetation within 150 feet of Preserve boundary.
[2]Based on 1996 MSCP GIS database.

Table 3-4: Species Points within 150 Feet of Preserve Boundary

Species	MHPA Project (Points)[1,2]	University Redesign (Points)[1,2]	Net Change
Coastal California Gnatcatcher	17	20	+ 3
Coastal Cactus Wren	12	11	- 1
Cooper's Hawk	1	- -	- 1
Golden Eagle	- -	- -	- -
Grasshopper Sparrow	- -	- -	- -
Least Bell's Vireo	1	- -	- 1
Orange-throated Whiptail	1	1	0
Southern California Rufous-crowned Sparrow	6	5	- 1
Otay Tarplant	- -	- -	- -
San Diego Barrel Cactus	9	14	+ 5
Snake Cholla	1	3	+ 2
Variegated Dudleya	- -	- -	- -

[1]Number of conserved species points within 150 feet of Preserve boundary.
[2]Based on 1996 MSCP GIS database. No species polygons are within the MHPA Project or University Redesign.

5. Effects of Ecotones or Other Conditions Affecting Species Diversity – The University Redesign results in a Preserve with similar topographic and structural diversity as the MHPA Project. The general consideration for this issue is that the components of the Preserve reconfiguration are all within a confined geographical area with significant variation in ecotone elements and habitat diversity throughout. Therefore, minor adjustments in the Preserve boundary would not result in a significant overall difference in ecotone considerations. Areas added include the slopes on the west side of Salt Creek containing an interdigitated mosaic of coastal sage scrub, maritime succulent scrub and grasslands, similar to what is found on the eastern side of Salt Creek, which is being removed from the Preserve. In addition, the University Redesign adds areas in the Otay River Valley which contain favorable ecotone features, including a diverse mix of grassland and scrub habitats.

6. Effects to Species of Concern Not on the Covered Species List – Most of the species of concern found in areas affected by the Preserve boundary modifications that would result from the University Redesign are included on the Covered Species list. The species of concern that are not covered but that have the potential to occur in this area are mainly grassland associated species, such as the grasshopper sparrow and certain butterfly species. The University Redesign includes conservation of an additional 59.3 acres of grassland, providing for additional conservation potential for these species. The boundary modification, therefore, is not anticipated to increase the likelihood that an uncovered species will meet the criteria for listing under either the Federal or State ESAs.

7. Conclusion – The biological value for the University Redesign included in the Chula Vista Subarea Plan is the same or higher than the existing proposal under Policy Option 2 included in the MHPA Project. As a result, the University Redesign meets the requirements of the MSCP Subregional Plan for adjustments to the boundary of the MHPA, under the "Like or Equivalent" exchange concept. In some cases the University Redesign, provides additional benefits to conservation, including 78.8 acres of additional habitat conservation overall and the addition of two significant wildlife movement features: one connecting habitat in Salt Creek to habitat and species populations in the northern and northeastern areas and the other expanding the connection with the Otay River Valley and facilitating wildlife movement to the south, east and west. The University Redesign meets or exceeds and is therefore consistent with all conservation objectives for the Covered Species within the *Chula Vista Subarea* under the MSCP Subregional Plan.

3.1.6 Quino Checkerspot Butterfly Coverage

The QCB was listed by the USFWS as an Endangered Species on January 16, 1997 (62 FR 2313). This butterfly was not covered by the adopted MSCP Subregional Plan due to lack of sufficient information about the species at the time the Subregional Plan was prepared. Table 3-5 of the MSCP Subregional Plan states: "Unknown conservation level and lack of assurances that Plan will protect preferred habitat (mesa tops/grassland) and connection to known source populations; therefore, not covered by the Plan."

The Final EIR/EIS for the MSCP Subregional Plan evaluated 98 species for potential coverage by the Subregional MSCP program. The Final EIR/EIS evaluated each species with respect to the proposed regional MHPA. The MHPA defines the area within which the permanent regional preserve system will be assembled. As stated by the Final EIR/EIS "the MHPA reflects the culmination of a biological analysis of the MSCP study area with regard to the distribution and value of vegetation communities and sensitive species in the study area, as well as the configuration of private and public lands that potentially would be included in a preserve system."

The Final EIR/EIS found that the MHPA would provide adequate protection for 85 of the 98 species studied. The QCB was analyzed and discussed in the Final EIR/EIS but not included among the 85 species determined to be protected adequately under the program as proposed by the MSCP Subregional Plan. In making this finding, the Final EIR/EIS found that there was insufficient information to make the necessary determination, and included the following summary in Table 4.3-1: "One known extant location in San Diego County occurs near Vernal Pools with host plant *Plantago insularis.* Recent sightings indicate potential ability for recolonization into MSCP area."

Since the adoption of the MSCP Subregional Plan, QCB surveys have been undertaken throughout the southern California range. A QCB Recovery Team was assembled by USFWS in September 1999 to analyze existing information and new data collected from more recent surveys. A QCB Draft Recovery Plan was issued by USFWS in January 2001, and on February 7, 2001 the USFWS issued a Proposed Critical Habitat designation for the species. Based upon this information, a QCB conservation program for Chula Vista has been prepared and will be implemented as part of this Subarea Plan. The QCB conservation program is incorporated as Section 4.4 of this Subarea Plan.

3.2 Summary of Subarea Conservation and Take Estimates

Take of species within the *Chula Vista Subarea* will be allowed as follows:

1. Outside Preserve Boundaries – This Subarea Plan will authorize Take outside of the Preserve. Take outside the Preserve within Covered Project areas will be subject to the project entitlements for Covered Projects, and project-specific conditions for coverage established by this Subarea Plan. Take outside the Preserve in all other areas of the City will be subject to the City's HLIT Ordinance described in Section 5.2.2 of this Subarea Plan.

2. Inside Preserve Boundaries – Take within designated 100% Conservation Areas (Figure 1-2) within Covered Projects will be authorized in accordance with project entitlements for Covered Projects, project-specific conditions for coverage established by this Subarea Plan, Section 6.0 of this Subarea Plan, and the HLIT Ordinance. Take in mapped 100% Conservation Areas in all other parts of the City will be authorized subject to the City's HLIT Ordinance and Section 5.0 of this Subarea Plan.

   Take in 75-100% Conservation Areas (Figure 1-2), will be avoided or limited to a maximum of 25% of the Project Area, and impacts in these areas will be designed to avoid environmentally sensitive areas to the maximum extent practicable, in accordance with the HLIT Ordinance.

3.2.1 Conservation Summary

Estimates for Take and Conservation are shown on Table 3-5 of this Subarea Plan. Areas of habitat anticipated for Take are shown on Figure 3-3. The conservation program set forth in this Subarea Plan will be implemented when the Federal 10(a)(1)(B) and State 2835 permits are granted to the City. Implementation of this Subarea Plan will ensure conservation and management of approximately 9,243 acres. An estimated 4,993 acres will be located within the Subarea and will result in a Preserve that is managed by the City and/or designated Appropriate Managing Entities. An additional approximately 4,250 acres will be conserved in the MHPA outside the Subarea as a result of mitigation for development within the City and implementation of this Subarea Plan.

As shown on Table 3-5 of this Subarea Plan, the Preserve within the *Chula Vista Subarea* will be comprised of approximately 3,552 acres of upland habitats, approximately 1,005 acres of Wetlands, and 436 acres of disturbed, agricultural and/or developed land. Conservation of upland habitats within the Preserve constitutes approximately 49% of all upland habitats within the Subarea. The approximately 4,250 acres of additional upland habitat conservation occurring in the MHPA outside City boundaries through Subarea Plan implementation substantially increases the upland conservation to a total 7,802 acres, resulting in an overall upland conservation ratio of approximately 2:1.

Approximately 93% of the existing estimated 1,080 acres of Wetlands identified within the Subarea are located within the Preserve (1,005 acres). Seventy-five (75) acres of Wetlands have been identified in the Subarea located outside the Preserve. Eight (8) acres of Wetlands located outside the Preserve are in development areas. The remaining Wetlands located outside the Preserve are either currently held in public ownership or are included in Wetland preservation areas associated with previously approved Federal and/or State permits. Any impacts to Wetlands will be subject to the Wetland protections discussed in Section 5.4.2 of this Subarea Plan. Section 5.4.2 provides a complete inventory of the Wetlands located outside the Preserve, and discusses Wetlands protections provided by this Subarea Plan both inside and outside the Preserve.

The following Table 3-5 lists all existing habitat types, acreages and Take estimates, and levels of conservation anticipated for the *Chula Vista Subarea.*

Table 3-5: Take and Conservation Estimates for *Chula Vista Subarea*

Vegetation Communities	*Total in Subarea*	*Estimated Take**	*Est. Preserve Contributions*	*Conservation Percentage*
Upland Habitats				
Coastal Sage Scrub	3,815	1,397	2,418	65%
Maritime Succulent Scrub	293	103	190	65%
Chaparral	28	0	28	100%
CSS / Chaparral Scrub	0	0	0	N/A
Grassland (all types)	3,125	2,229	896	29 %
Oak Woodland	2	0	2	100%
Tecate Cypress Forest	0	0	0	N/A
Eucalyptus Woodland	43	25	18	42%
Upland Subtotals	7,306	3,754	3,552	49%
Wetlands				
Southern Coastal Salt Marsh	204		202	99%
Freshwater/Alkali Marsh	16		14	88%
Riparian Forest	10		10	100%
Oak Riparian Forest	0		0	N/A
Riparian Woodland	0		0	N/A
Riparian/Tamarisk Scrub	604		594	99%
Open Water/Freshwater	59		24	41%
Disturbed Wetlands	28		15	54%
Natural Flood Channel	159		146	92%
Wetland Subtotals	1,080		1,005	93%
Subtotal All Vegetation	*8,386*		*4,557*	*54%*
Other/Non-Habitat				
Disturbed	845		352	
Agriculture	6,192		62	
Developed	15,288		22	
Shallow Deep Bays	1,322		0	
Other Agencies	1,012		0	
Other Subtotal	24,659		436	
Subtotal Within Subarea	33,045		**4,993**	
Additional MSCP Preserve Contributions Outside Subarea				
Rancho Del Rey			360	
Sunbow II			65	
Rolling Hills Ranch			49	
Otay Ranch (City contribution)			3,610	
San Miguel (north parcel mitigation)*			166	
Subtotal Outside Subarea			*4,250*	
Total Chula Vista Contribution to Preserve			**9,243**	

*Take estimates include Planned Facilities which may cross Preserve land, described in Section 6.3.3.1.